



Review Article

Importance of Milk

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ABSTRACT

A diet high in saturated fat content, heredity, and various metabolic conditions such as type II diabetes, influences an individual's level of cholesterol. It's a serious condition that increases the risk for heart disease. Most cholesterol in the body is made by the liver from a wide variety of foods, but especially from saturated fats, such as those found in animal products. It has been classified to LDL & HDL cholesterol. Ideally one should aim for total cholesterol of under 200 mg/dL and LDL under 100 mg/dL. The optimal LDL and HDL ratio is 4:1 (or less). HDL can be raised naturally without the use of medications. Other authentic ways of increasing HDL cholesterol are exercise and selective foods in diet. "HDL cholesterol is a scavenger that cleans up bad cholesterol. Having high levels of HDL cholesterol (at least 60 mg/dL) helps protect against CAD. Milk is a widely consumed beverage that is essential to the diet of several millions of people worldwide because it provides important macro- and micronutrients. Milk is recognized as being useful during childhood and adolescence because of its composition; however, its relatively high saturated fat proportion raises issues of potential detrimental effects, namely on the cardiovascular system. Buffalo is playing a leading role in the national economy by producing milk, meat and draught power. Out of total milk produced in the country, buffalo contributes about 56 %, followed by cattle (34%) and sheep/goat/camel (9%). Due to high fat contents of buffalo milk, it is the most preferred species in India. Buffaloes not only fulfill the protein requirements of the human population by milk and meat, but are also have a great share in providing the traction power for various agricultural purposes. This review evaluates the most recent literature on dairy and human health, framed within epidemiologic, experimental, and biochemical evidence. As an example, the effects of milk (notably skimmed milk) on body weight appear to be well documented, and the conclusions of the vast majority of published studies indicate that dairy consumption does not increase cardiovascular risk or the incidence of some cancers. Even though the available evidence is not conclusive, some studies suggest that milk and its derivatives might actually be beneficial to some population segments. Although future studies will help elucidate the role of milk and dairy products in human health, their use within a balanced diet should be considered in the absence of clear contraindications. The aim of this review paper is to point out the production performance of Pakistani buffaloes with a little touch to exotic buffaloes and the suggestions/recommendations to improve their performance to produce more.

Key words: Cholesterol, milk, saturated fatty acids, LDL, HDL, Buffalo, problems.

INTRODUCTION

Milk is an essential component of the diet of ~6 billion people. The world production of milk reaches 730 million tons/y. ^[1, 2] Even though mammals produce milk to feed their offspring, in many areas

of the world humans continue to consume milk throughout their life. However, it must be emphasized that lactose intolerance is widespread throughout the world and that a large proportion of the world's population would not benefit from the putative benefits

of milk. In addition to milk, several dairy products such as cream, butter, yogurt, kefir, and cheese have been produced and consumed worldwide for millennia. Therefore, the impact of milk and dairy products on human health is quantitatively relevant and has been the subject of several investigations, on both whole products and their isolated components. In particular, the fat portion of milk (largely composed of SFAs) and some of its minor components, notably calcium and oligosaccharides, are being actively researched for their potential health roles. [22,14] This review summarizes the most recent studies on milk and human health and critically discusses the putative actions of milk and principal dairy constituents. It has first class proteins and contains all essential amino acids. Meat, eggs, and dairy should be organic and derived from pasture-raised animals. India is one of the biggest producers as well as consumers of buffalo milk. Buffalo milk is thick and creamy and is thus suitable for making traditional milk products such as yogurt, ghee and cottage cheese or paneer. [21] Another good feature of this milk is that it can be stored for a longer time due to its high peroxidising activity. It is not only a tasty option but is a healthy nutritious daily drink and can be consumed by people of all ages. Here are factors that make buffalo milk a healthy choice. Buffalo milk is a storehouse of proteins and contains all the 9 amino acids. One cup of buffalo milk will contain around 8.5g of protein and if you drink 2 glasses every day, you would be consuming 19g of protein. The milk is recommended for older people as the high protein content in it will help prevent muscle loss. Buffalo milk is extremely rich in calcium and essential for your bone and dental health. Regularly drinking buffalo milk can also protect you against osteoporosis. The milk is also a good source of other minerals such as magnesium, potassium and phosphorus. It is also a rich source of iron. Iron is an element that helps our red blood cells

supply oxygen to various parts of the body. Iron also helps all the muscles in the body including the heart muscle function better. The creamy milk is a rich source of riboflavin and vitamin B12. [15] A study published in the Journal of Agricultural and Food Chemistry concluded that increasing the intake of vitamin B12 can significantly reduce the chances of heart attack and stroke. Significant amounts of vitamin A, vitamin C and thiamine are also found in this milk. It also contains small amounts of folate, vitamin B6 and niacin. A common health issue most people face these days is higher than normal cholesterol levels. Buffalo milk is significantly low in cholesterol and can thus be a healthy option for those suffering from diabetes and heart diseases. Additionally, the milk also aids in bringing down your LDL or bad cholesterol levels in your body. If you like the taste of milk and want to gain weight then you should definitely include buffalo milk in your diet. It has a much higher fat content than cow's milk and can be a part of a healthy weight gain diet. [7] The fats can help increase your muscle mass and get you out of that skinny frame. However, make sure you drink this in moderation as a certain percentage of fat in the milk is saturated fat that can block your arteries. You may also follow this diet. Milk is one of the best sources of calcium for the body. Milk is filled with Vitamin D that helps the body absorb calcium. [17] Proper calcium intake contributes to strong and healthy bones. Drinking milk provides other benefits such as healthy teeth, rehydration and improves vitamin intake. Milk is good for us. But beyond this vague notion and the familiar milk-mustache media campaign, confusion clouds the specifics of exactly why that is. What about milk is good for us? How does it really improve our health? Experts share the makeup of milk and dive into the details that make this drink a dietary staple for millions of us.

Review: According to the National Dairy Council, milk is filled with nine essential nutrients that benefit Calcium Builds healthy bones and teeth; maintains bone mass. ^[20] Protein: Serves as a source of energy; builds/repairs muscle tissue, Potassium: Helps maintain a healthy blood pressure, Phosphorus: Helps strengthen bones and generate energy Vitamin D: Helps maintain bones Vitamin B12: Maintains healthy red blood cells and nerve tissue Vitamin A: ^[20] Maintains the immune system; helps maintain normal vision and skin Riboflavin (B2): Converts food into energy Niacin: Metabolizes sugars and fatty acids In other words, milk packs quite a punch when it comes to nutrition- and you don't have to drink a gallon to reap the benefits, the National Dairy Council says. In fact, the council says that just one 8-ounce glass of milk provides the same amount of vitamin D you'd get from 3.5 ounces of cooked salmon, as much calcium as 2 1/4 cups of broccoli, as much potassium as a small banana, as much vitamin A as two baby carrots and as much phosphorus as a cup of kidney beans!. All of these nutrients contribute to our overall health and wellness, and they can even play a part in weight loss, says ^[21] Dr. Brian Roy, an associate professor of applied health sciences at Canada's Brock University. He published a study on the impact milk has on the body post-exercise. ^[18] While he admits there's some controversy surrounding milk's influence on weight loss and body fat in general, he also shares that recent studies have shown that when milk was consumed by young adults after weight training, they lost more body fat and gained more muscle mass than those who had consumed different drinks that contained the same energy and macronutrients."However, simply adding more milk to your diet will add to your total energy intake. So, if you add more milk to your diet, it likely will be most effective if it replaces other sources of energy from your diet, to ensure you are not consuming excess calories."

DISCUSSION

According to research led by professor Peter Elwood of Cardiff University, drinking milk can lessen the chances of dying from illnesses such as coronary heart disease and stroke by up to 15 to 20 percent. This research-a systematic review of evidence from 324 published studies-is actually the first time that disease risk associated with drinking milk has been looked at in relation to deaths from those diseases. However, there are conflicting studies that claim milk actually contributes to disease, specifically heart disease. What about them? "The fact that milk-drinking raises cholesterol is, for many people, proof that milk is a cause of heart disease," Elwood says. "But cholesterol is only one mechanism in heart disease. Blood pressure is another relevant mechanism, and milk-drinking is associated with a lower blood pressure. ^[8] It is therefore totally unreasonable to base conclusions about milk and heart disease on the effect on cholesterol alone."Heart disease isn't the only thing that can be affected by milk. ^[6] Analysis of large, long-term studies shows that milk and dairy consumption are associated with a small reduction in death from heart disease events, strokes, and new cases of type 2 diabetes, colon cancer and possibly bladder cancer. "As heart disease, stroke, diabetes and cancer are major sources of healthcare expenditure, any measure that is associated with a reduction in these diseases-however small that reduction is-is also bound to have an impact on healthcare costs," Elwood says. To get the full benefits of milk, including the nine essential nutrients, the USDA says adults should consume three servings of milk (or cheese or yogurt) each day. A serving size is 1 cup of milk or yogurt, 1.5 ounces of natural cheese or 2 ounces of processed cheese. So, go ahead-drink your milk. It's good for you. The health benefits of milk include increased bone strength, smoother skin, stronger immune system, prevention of illnesses such as hypertension, dental decay, dehydration, respiratory problems, obesity,

osteoporosis and even some forms of cancer. The beneficial health nutrients obtained from milk are essential for the human body and help prevent a number of chronic ailments. ^[9,10] The reason mammals have this is because this is what their young are naturally supposed to consume until they are strong enough or old enough to hunt for themselves or eat what their parents typically eat. Humans also have this ability, which is why we have begun to explore the interesting world of milk from other animals, in the hopes that milk could continue to nourish us throughout our lives, rather than simply at the beginning of it.

Many animals can provide us with this but cow's milk is considered the best wholesome supplement for children as well as for adults. ^[6] It is also the most accessible, while the milk of other animals like buffalo, goats, sheep, camels, reindeer and yak is much more difficult to acquire. Milk from horses and donkeys can also be consumed by humans, but that is even less common, and much less pleasant to extract. The health benefits of milk can be achieved from drinking milk directly or by consuming dairy products such as cheese, butter, curd, clarified butter or ghee, dairy whitener, ice cream, cottage cheese or paneer, flavored milk, or milk sweets. Put it this way, around the world, there are more than 6 billion people who regularly consume some type of food that is based on milk from an animal; it is one of the most essential elements of the human diet, since these animals that create milk are on almost every continent and country. ^[11] The US Department of Agriculture (USDA) has clearly mentioned in its Dietary Guidelines to include milk and milk products to ensure a healthy, balanced diet. The nutritional value of milk is so well known that people all around the world include it as a staple part of their diet. Adding milk to your daily diet can also help you to achieve a well-balanced diet. Milk is an ideal source of nutrients such as vitamin A, B12, D calcium, carbohydrates, phosphorous, selenium, magnesium, protein, zinc and

riboflavin. ^[5,6] The Teagasc Dairy Products Research Center at Moorpark, Fermoy has reported recent research on using milk to neutralize the cholesterol content of the body. Most of the caloric content in milk comes from the natural sugars found in it. These are essential to the overall functioning and health of the body, and they reduce the chances of a number of deficiencies, and boost health in a variety of ways! Let's explore more about the important impact of milk and milk-based products on our health. Milk deficiency can cause severe anemia, osteoporosis and other related illnesses. The consumption of milk is essential for maintaining good health and having the energy and strength to do normal activities. It is the best source of calcium for all age groups, and since calcium is considered the most important mineral in the healthy growth, functioning, repair, and durability of the bones and skeletal system, milk will always have a significant role in people's diets, as a way of preventing calcium deficiency or osteoporosis.

SUMMARY AND CONCLUSION

Milk is an extremely beneficial drink for the health of the human body. Some of the advantages of drinking this life-giving nectar are as follows: Milk is the best source of calcium that we can supply to our body. Body suffers from major chronic ailments such as cancer, bone loss, arthritic conditions, migraine headaches, premenstrual syndrome, and obesity in children. ^[12] It also functions as a healthy aid in losing unwanted fats and reducing weight. ^[23] Calcium is an essential mineral in the creation of bone matter, and bone mineral density measurements rely highly on calcium as the main support structure of our body. Milk is the quickest, least expensive, and most readily available source of calcium on the market. Although most of the focus of calcium is on bones, it has also been shown to reduce cardiovascular disease and the chances of strokes. Two long-term studies in Japan have positively shown a correlation between daily calcium

intake and a reduction in stroke, atherosclerosis, and cardiovascular disease. [3,4] Therefore, grab some milk for a healthier heart! Furthermore, the magnesium and potassium content in milk both act as vasodilators, which reduces blood pressure, increases blood flow to vital organs, and reduces the stress on the heart and cardiovascular system. The peptides found in milk are also believed to inhibit the creation of ACEs, [13] (angiotensin-converting enzymes), which increase blood pressure. As mentioned above, milk is rich in calcium, which is essential for growth and the proper development of strong bone structure. Bone disorders such as osteoporosis can be prevented with a significant daily intake of milk. Children deprived of cow's milk have an increased chance of suffering from bone fractures when injured, and their healing time will be significantly higher if they don't have a steady stream of calcium to aid in the regrowth of bone matter. [16] Encouraging children and youngsters to drink milk will give them excellent Dental Care, as milk protects the enamel surface against acidic substances. Drinking milk for energy and health would also lessen the frequency of children consuming soft drinks, thus reducing the risk of decaying teeth and weak gums. Fluids are an integral part of the human body, and the body needs to be frequently replenished with liquids as they are used up within the body. Water is essential for growing children and they must drink at least six to eight glasses of fluid every day. Milk contains a good quantity of water molecules and is considered the best fluid for rehydration, outside of drinking actual water. Water makes up more than 80% of our body mass, and the balance of fluids in our body is essential for every single process in our body. That is why dehydrations such a major and dangerous problem, as it threatens all of our metabolic functions. So, if you can't find any water, grab a glass of milk. [25] For thousands of years, milk has been known to benefit our skin by helping us maintain a

fair and smooth complexion. Therefore, milk and milk products are used in a number of cosmetic preparations to this day. Milk is also good for treating dry skin, so if you have dry skin, apply milk on your face and other affected areas, leave it on for about 15 minutes and then wash it off. The milk solids nourish and smooth your skin. [15] The lactic acid present in milk is known to aid in removing dead skin cells, thereby rejuvenating your skin and keeping it fresh. Finally, simply drinking milk, due to its impressive content of vitamin A, helps to boost the health of the skin from inside the body, particularly since the antioxidant potential of milk helps to eliminate free radicals, the dangerous byproducts of cellular metabolism that are partially responsible for premature aging of the skin, resulting in wrinkles and age spots. According to medical research, drinking milk considerably improves our. [17] A person who consumes a carton of whole milk doubles his chances of fulfilling his calcium requirement for the day. Calcium, along with all of the other essential minerals listed above, are necessary for the daily diet in order to ensure proper functioning of every aspect of our body. Consumption of milk products can also help in reducing acidity throughout the body. Drinking cold milk specifically provides relief from acidity. [14] It contains many vitamins and minerals to keep fit, healthy and strong. A full glass of milk contains vitamins A and B for good eyesight and increasing red blood cell count, carbohydrates for vitality and energy, potassium for proper nerve function, magnesium for muscular function, phosphorous for energy release, and proteins for body repair and growth. It also keeps body functioning as you get older, more so than some other vitamins and minerals. Intake of milk may also provide relief to those suffering from colon cancer. New study suggests that a diet rich in dairy products may slightly extend lives of people diagnosed with colon cancer. Some people may have lactose intolerance and may have trouble digesting milk. Lactose is a natural

sugar found in milk. The symptoms of lactose intolerance include bloating, stomach pain, gas and diarrhea. For kids it is advisable to consult your health care provider since this is not so common among children. For adults, lactose free milk and milk products are readily available on the market. One drinks varieties of soy milk or almond milk to avoid lactose, yet still receive many of the same benefits as mammal-derived milk.

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